Name: \_\_\_\_\_\_\_\_\_\_\_­­­­­­­­­­­­­­­­­­­­­\_\_\_\_\_\_­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_

**Virtual Owl Pellet Dissection (Makeup Lab)**

Due Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(One week from the original lab date)

Go to the following website: http://www.kidwings.com/owlpellets/flash/v4/index.htm

On the website: Read the Pellet Information and the background below.

* Click on the little nest in the bottom left corner to bring you back to the homepage.
* Click on “Virtual Owl Pellet” and click the option for “labels on”.

(READ ALL DIRECTIONS BELOW BEFORE YOU START!)

Click on the pellet to remove the fur, then drag the bones over to the diagram (IMPORTANT: the **hand icon** that represents your mouse must be right on top of area you want to drop put the bone! It will look like the bone is in the wrong place, but it will go wherever your mouse is when you release it.)

**IMPORTANT:** As you are working… you should be filling in tally marks for the number of bones AND drawing the bones you find below. When you put the last bone into the skeleton, the screen changes! (If you do this, you’ll have to go back and count based on the skeleton picture you were filling in.)

* When you are done with the lab, you will need to either show it to one of your teachers or print the certificate with your name on it.

**Background:**

Owl pellets are masses of bone, teeth, hair, feathers and exoskeletons of various animals preyed upon by raptors, or birds of prey. Pellets are produced and regurgitated not only by owls, but by hawks, eagles and other raptors that swallow their prey whole or in small pieces. Owls feed early in the evening and regurgitate a single pellet approximately 20 hours after eating. Unlike snakes, the protein enzymes and strong acids which occur in the digestive tract of raptors do not digest the entire meal. The relatively weak stomach muscles of the bird form the undigested fur, bones, feather etc. into wet slimy pellets. In this process even the most fragile bones are usually preserved unbroken. The birds then regurgitate the pellets through their mouths.

The owl pellets that you will be examining in this lab have been collected and fumigated from common barn owls. Owl pellets themselves are ecosystems, providing food and shelter for communities which may include clothes moths, carpet beetles and fungi. Clothes moth larvae are frequently abundant in pellets, feeding on fur and feathers. The larvae metamorphose near the surface of a pellet in cocoons made of fur.

Name: \_\_\_\_\_\_\_\_\_\_\_­­­­­­­­­­­­­­­­­­­­­\_\_\_\_\_\_­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_

**Virtual Owl Pellet Dissection (Makeup Lab)**

Due Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(One week from the original lab date)

**Data Collection:**

Length: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Draw the bones you find.**

Width: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How many of the following**

**bones did you find?**

Humerus: \_\_\_\_\_\_\_\_

Femur: \_\_\_\_\_\_\_\_

Lower Jaw: \_\_\_\_\_\_\_\_

Skull: \_\_\_\_\_\_\_\_

Vertebrae: \_\_\_\_\_\_\_\_

Shoulder Blade: \_\_\_\_\_\_\_\_

Ulna/Radius: \_\_\_\_\_\_\_\_

Ribs: \_\_\_\_\_\_\_\_

Pelvic Bones: \_\_\_\_\_\_\_\_

Tibia/Fibia: \_\_\_\_\_\_\_\_

**Analysis:** 1. Are owls producers or consumers? Defend your answer.

2. Are owls carnivores or herbivores? Defend your answer.

3. How many animals did this owl eat?

4. What do we know about the digestive system of an owl based upon the pellets? (For example, is it strong or weak? What is it able to digest? What is it not able to digest? Hint: read the background at the beginning.)

5. Owl pellets not only can give us information about the diet of the owl; owl pellets also provide a habitat for other animals, in fact an owl pellet is a little ecosystem all on its own. What kind of organisms are found in the owl pellet ecosystem? (Hint: read the background at the beginning.)

6. Other types of birds form pellets. What would you expect to find in the pellet of a seagull?

7. Owls, hawks, and eagles are types of raptors**, (**animals which have hooked beaks and sharp claws) and are therefore adapted for seizing prey animals. Hawks and eagles differ from owls in that they eat their prey by tearing them into small pieces, picking out the flesh and avoiding most of the fur and bones. They also have strong stomachs which can digest most of the bone material which they might eat. The relatively small amount of bone and fur that remain will be compacted by their stomach muscles into a pellet similar to the owls. Do you think an eagle pellet would be as useful for dissecting as an owl’s? Why or why not?